FACT SHEET
(Pursuant to Nevada Administrative Code (NAC) 445A.401)

Permittee Name: McEwen Mining Inc.

Project Name: Gold Bar Project 2

Permit Number: NEV2015119

Review Type/Year/Revision: Renewal 2022, Fact Sheet Revision 00

A. Location and General Description

Location: The Gold Bar Project 2 is located in Eureka County in central Nevada approximately 30 miles northwest of Eureka, Nevada in the southern Roberts Mountains.

Project elevations range from 6,500 feet above mean sea level (amsl) at the base of the Gold Bar South Pit to 8,950 feet amsl at the Gold Ridge Pit high wall. The project is located within Sections 1-4, 9-15, 17-22, 24, 25, and 28-30, Township 22 North (T22N), Range 50 East (R50E); Sections 25-28 and 33, T22N, R49E; Sections 4, 9, 16, 21, 22, 27, and 34, T21N, R49E; Sections 3, 10, 11, 14, 23-25, and 36, T20N, R49E; Section 31, T20N, R50E; Sections 6, 7, 8, and 17; T19N, R50E; Sections 30-32, T22N, R51E; Sections 5, 8, 9, 16, 21, 27, 28, and 34, T21N, R51E; Sections 3, 10, 15, 22, 23, 26, and 35, T20N, R51E; Section 34, T23N, R50E, Mount Diablo Baseline and Meridian.

The Project area consists of 5,111 acres of public land administered by the U.S. Department of the Interior, Bureau of Land Management (BLM), Battle Mountain District, Mount Lewis Field Office and 193 acres of private land owned by Golden Pick LLC, a wholly-owned subsidiary of White Knight Gold (U.S.) Inc.

Location: Primary access to the site is from U.S. Highway 50 by traveling north on 3 Bars Road (Eureka County designation M-107) for approximately 16 miles, then east for 1.5 miles on General County Road G-215 to the old Atlas Mill site. From the mill area, the Project boundary is accessed by traveling east on the existing Atlas Haul Road for approximately 7 miles. This primary access route is surfaced with compacted gravel.

Secondary access to the site is from U.S. Highway 50 by traveling north on Roberts Creek Road (Eureka County designation M-108) for approximately 14 miles, and then northwest on General County Road G-215 for 1.5 miles to the Project boundary east of the proposed process area. This access road was improved by McEwen Mining Inc. (MMI) with development of the Project.

General Description: The Gold Bar Project 2 consists of 6 open pits (Gold Pick, Gold Ridge, Cabin Creek 1, Cabin Creek 2, Cabin Creek 3, and Gold Bar South pits) with associated waste rock dumps, heap leach facility, carbon-in-column (CIC) circuit to process heap leach solution, Adsorption, Desorption, and Recovery (ADR) plant, process solution pond, event pond, and ancillary support facilities.
The Gold Stone Pit is not authorized to be mined as characterization is to be completed, the Division did authorize the mining of stockpiles and waste rock dumps.

B. Synopsis

History: The original Gold Bar, Gold Pick, and Gold Ridge satellite deposits were mined by the Atlas Corporation between 1986 and 1994. Activities associated with mining included the construction of open pits, waste rock dumps, and extensive exploration disturbance. The area was effectively abandoned in 1999 when Atlas filed for bankruptcy.

The Gold Bar Project 2 will incorporate approximately 80 percent (536.3 acres) of the existing un-reclaimed disturbance from the Atlas operations. The Atlas Gold Stone waste rock dumps contain economical materials and will be mined as ore. The Project will consist of six open pits, eleven waste rock dumps, a heap leach facility, two double-lined ponds, ADR plant, and associated facilities.

Geology: There are two structural blocks in the district, separated by the regionally extensive Roberts Mountain Thrust (RMT). Deepwater shale and chert, known as the Vinini Formation (upper plate), were pushed eastward onto the carbonates (lower plate) along the RMT. Younger (post-Permian) low-angle faulting locally placed lower plate rocks on top of both the upper and lower plates. Late-Paleozoic clastic sedimentary rocks were deposited on both upper and lower plates. Tertiary extension resulted in the complex basin and range block faulting that defines the range today. The rocks of the upper plate of the RMT are composed of highly-deformed siliceous rocks containing minor carbonate beds. Erosion has removed much of the upper plate in the Project area, exposing a large window of lower plate rocks. The lower plate autochthon consists of a 2,500- to 3,300-foot-thick section of limestone and dolomite deposited on the pre-continental shelf. The characterization of the lithology in the area indicates a minimal amount of potential acid generating material.

Mining: Six open pits are planned; the Gold Ridge Pit, Gold Pick West and East Pit, Cabin Creek Pits (3), and Gold Bar South Pit. Mining will be conducted with conventional truck and shovel/loader hauling. The Gold Pick Pit will be mined as one pit with 5 laybacks. The Gold Ridge Pit is a single layback, the Cabin Pits are two pits each mined as a single phase. In October 2021, the Division approved a minor modification to incorporate stockpiles and waste rock dumps from the Gold Stone area and add Cabin Creek Phase 3. The proposed Gold Stone areas to be mined include the North, Northwest, West Pit Backfill, and South dumps. The approximate tonnage is 80,000 tons for the Gold Stone stockpile areas and 6,200,000 tons for the Cabin Creek Phase 3 of which 500,000 tons are ore. The characterization of the material proposed to be mined is acid neutralizing.

The Gold Bar South Pit will be a new open pit located east southeast of the heap leach pad. The Pit will be approximately 290 feet deep and consist of approximately 13.8 million tons of material.
The waste rock facilities are designed to assist with the reclamation of the disturbed area. There are plans for 11 waste rock facilities for the Project.

**Designated Waste Dump:** The designated waste will be placed into the Pick East Lower Dump. The majority of the designated waste will be mainly mined in the final year of production. Designated waste is defined as material that demonstrates the potential to generate acid with a high potential for metal release or is net neutralizing with a high potential for metalloid release, which only accounts for 6 percent of the total waste rock. When closing the designated waste rock dump, it will be encapsulated with a minimum of 5 feet of non-designated waste, a foot of clay or bentonite amended soil, followed by another 5 feet of non-designated waste to protect against erosion. All designated waste generation is expected from the Gold Pick Pit.

**Stormwater Diversion and Culverts:** A stormwater diversion system was constructed to convey water flows based on the 100-year, 24-hour event, around the Gold Bar Facility. Two diversion channels divert upstream run off away from the Ridge and Pick waste rock dumps, which will be a 2-foot deep trapezoidal channel. Diversions around the heap leach pad (HLP) divert water to drainages downstream from the HLP.

**Processing:** Ore from the pits will be transported with trucks to the crushing and agglomeration circuit to be ultimately deposited on the HLP.

**Mobile Crusher:** In June 2021, the Division approved a mobile crusher to provide stemming material and road rock for the facility. The additional crusher will allow for additional operational flexibility and will be moved throughout the mine life. The crusher will consist of a crushing unit, a screen, and two conveyors.

**Crushing and Agglomeration:** Ore will be hauled from the pits to a stockpile that is transported via loader to the primary crusher. The ore is crushed to 80 percent passing a 4-inch diameter, then transported via conveyor belts to an agglomeration drum. The ore is agglomerated with concrete and a barren cyanide leach solution.

In order to provide containment for the cyanide during the agglomeration process an Agglomeration Pad was constructed. The Pad is constructed from top to bottom of the following: 2-feet of crusher reject material, an 80-mil high density polyethylene (HDPE) geomembrane, and a 1-foot layer of low permeability soil (maximum hydraulic conductivity of $1 \times 10^{-6}$ centimeters per second (cm/sec)) or bentonite amended soils, moisture conditioned and recompacted to 95% of maximum dry density (American Society for Testing and Materials (ASTM) D1557). Any excess solution from the agglomerator will gravity drain to the conveyor belt corridor and ultimately to the HLP.

After agglomeration, ore is transported via conveyors to the HLP and placed by a radial stacker. The conveyors are located on a HDPE-lined overland corridor which is constructed from top to bottom of the following: 8-inches of crusher reject material, 80-mil HDPE liner, 1-foot low permeability soil ($1 \times 10^{-6}$ cm/sec) or bentonite amended soils moisture conditioned and recompacted to 95% of
maximum dry density (ASTM D1557), and prepared subgrade. Any solution collected in the conveyor corridor will gravity drain to the HLP collection system.

**Heap Leach Pad:** The 3.9 million square foot HLP, which is divided into two phases consisting of a total of eight cells (Phase IA with 4 cells, Phase IB Stage 1 with 2 cells and Phase IB Stage 2 with two cells), will ultimately accommodate 17.3 million tons of agglomerated ore. The proposed lift thickness is 20 feet with a maximum permitted height of 190 feet above the liner surface. Cyanide solution is applied to the HLP at a maximum volume of 3,000 gallons per minute (gpm) at a maximum rate of 0.004 gpm per square foot.

The composite-liner system for the HLP consists of a minimum of 12-inch-thick prepared subgrade; 1-foot-thick low permeability soil layer with a maximum 1 x 10^{-6} cm/sec percolation rate or a bentonite admixture with select fill moisture conditioned and recompacted to 95% of maximum dry density (ASTM D1557 at +2% of optimum moisture); 80-mil double textured HDPE primary liner; and 3-foot overliner layer.

The overliner solution collection system consists of 4-inch-diameter perforated corrugated HDPE pipes that are placed on the liner at approximately 30-foot centers and covered with overliner material consisting of crushed ore or rock with the following specifications: 100 percent passing 2 inches and no more than 10 percent (by weight) passing 200-mesh.

The solution from the HLP will flow into two Pregnant Solution Tanks by gravity and then be pumped to the ADR plant. Any overflow from the Pregnant Solution Tanks will flow into the Process Solution Pond. The barren solution will be pumped from the ADR plant to a barren tank or Process Solution Pond then back on to the HLP.

**Process Solution Sampling Process:** The HLP contains eight monitoring points one for each cell (PSSP-01 to PSSP-07) and an alternative pregnant solution sample port (PSSP-08) located upstream of the discharge points at the pregnant solution tanks. Monitoring of the process solution of the HLP will be completed by compositing PSSP-01 through PSSP-07 for a sample or taking a single sample from PSSP-08.

**Solution Ponds:** The Process Solution Pond and Event Pond are hydraulically connected via an internal spillway. The Process Solution Pond is designed to have a storage volume of 7.13 million gallons at the internal spillway. The Event Pond is designed to have a maximum storage volume of approximately 4.9 million gallons with at two foot of freeboard below the external spillway. Each pond has a liner system consisting of, from bottom to top, 12-inches of compacted soil with a permeability of 1x10^{-6} cm/s or less (ASTM D1557), a 60-mil HDPE secondary liner, geonet, and 80-mil HDPE primary liner. The ponds are designed to hold the 25-year, 24-hour storm event and withstand the 100-year, 24-hour storm event.

Each pond has a leak collection solution recovery system (LCSR). The LCSRS consists of a 6-inch-diameter riser pipe located between the primary and secondary
liner from a 2-foot-deep sump. Below each sump, two feet of material was amended and compacted to a permeability of 1x10^-7 cm/sec.

_Solution Ponds Fluid Management:_ Both the Process Solution Pond and Event Pond have a maximum operating level in order to contain the 25-year, 24-hour and 100-year, 24-hour storm events. The Process Solution Pond has a maximum operating level of 21 feet (6,765 feet amsl) above the pump dead storage during Phase 1A and 18 feet (6,762 feet amsl) during Phase 1B.

The Event Pond stores snowmelt in the spring to be used as makeup water during the summer. The maximum water storage level is 8 feet (6,756 feet amsl) above the pump dead storage during Phase 1A and 3 feet (6,751 feet amsl) for Phase 1B.

Both the Process Solution Pond and Event Pond have a sump located on the bottom southwest corner of each pond. The sump is 4 feet deep in both ponds and is considered pump dead storage.

To aid in the solution management, the Permittee will have evaporators on site to lower the level of the ponds.

_ADR Plant:_ Once the solution is in the pregnant tanks, it is pumped to the ADR plant where it is run through a CIC circuit. Each of the five columns has a volume of 5,824 gallons and are arranged so that solution cascades by gravity through the five CIC tanks in succession as carbon is pumped counter-current to the flow. Barren solution exiting column five is conveyed to the barren tank.

The loaded carbon from the CIC circuit is washed with a strong acid and then stripped. The stripped carbon is regenerated in a kiln and then recycled back to the adsorption tanks. Strip solution is conveyed to a storage tank from which it is fed to the electrowinning tank. The gold bearing sludge generated in the electrowinning cell is retorted to remove mercury, then sent to the refinery where the gold is removed and poured into bars (doré). Mercury from the retort is stored in flasks to sell or dispose at a properly licensed facility. The mercury will be collected in a metric ton flask and shipped off site to a secure facility. The entire ADR Facility has secondary containment of at least 110-percent of the volume of the largest storage vessel. The ADR facility containment is constructed out of concrete.

A Schedule of Compliance Item required the ADR Design and appropriate fee to be submitted and approved by the Division before commencing construction of the ADR facility. This was completed and approved by the Division in April 2018.

On 28 March 2019, the Division approved a truck wash located approximately 1,500 feet north of the crusher pad. The truck wash will be 30 feet wide by 40 feet long and be graded at a slight angle to allow sediment and water to pool at one end. The pad will have berms around the edge of the pad and two layers of HDPE liner overlain to contain the water and sediment. Jersey barriers will be placed at the downslope ends and sides of the pad to aid in containment.

_April 2019 Releases:_ In April 2019 the release of approximately 1.4 million gallons of treated process solution down existing channels towards Roberts Creek occurred. The releases were due to frequent 100-year, 24-hour storm events. The released
solution contained elevated antimony, arsenic, cadmium, cyanide, mercury, nitrogen, and pH. Initial soil testing in the impacted area showed elevated concentrations of aluminum, arsenic, and cyanide. Initial testing of the surface water (creek and reservoir) did not show any constituents above Profile I reference values. The soils within the solution release channel may have elevated arsenic and nitrogen as a result of the released solution. The nitrogen is anticipated to be utilized by the plants and the arsenic is expected to attenuate with depth therefore the waters are not expected to be impacted. Based on the testing completed, the elevated constituent concentrations are not mobilizing to Roberts Creek. The Permittee monitored Roberts Creek quarterly till the end of 2021 and found the water was not degraded by the release. Additionally institutional controls (e.g. no camping signs) were utilized.

C. Receiving Water Characteristics

The Project is located in the northern Kobeh Valley Hydrographic Area (HA-139). The principal groundwater resources at the Project are contained in the alluvial materials of the Kobeh Valley near the south end of the Project area. The thickness of the alluvial aquifer increases to the south and exceeds 1,000 feet in the vicinity of Roberts Creek Ranch. The aquifer is composed of older (Quaternary-to-Tertiary-aged) alluvium in the northern part of the valley, and younger alluvium in the southern part of the valley. Recharge to the Kobeh Valley aquifer is mainly from precipitation in the surrounding mountains, including the Roberts Mountains in the north part of the Project area. Localized, perched aquifers are found in the bedrock of the Roberts Mountains. These perched aquifers surface as springs feeding Cottonwood, Rutabaga, and Roberts Creeks. Groundwater flow is mainly from the mountains to the south and east towards Devils Gate and Diamond Valley. Much of the data supporting this gradient come from exploration drilling and a limited number of wells near Roberts Creek. The inferred gradient tracks southeast dipping topography and the dip of sedimentary bedding in the Project area.

The depth to groundwater beneath the ultimate depth of the pits is estimated to be greater than 500 feet and the depth below the HLP is greater than 270 feet.

Material impacted by the mine has the potential to leach arsenic, antimony, and mercury as shown by the meteoric water mobility tests. The mined material has also been demonstrated to contain up to 2% iron oxides. Metalloids such as arsenic and antimony have been shown to be efficiently adsorbed by the iron oxides. Site specific attenuation data will be gathered as the site progresses to define the extent to which arsenic, antimony, and mercury will be attenuated.

D. Procedures for Public Comment

The Notice of the Division’s intent to issue a Permit authorizing the facility to construct, operate, and close, subject to the conditions within the Permit, is being published on the Division website: https://ndep.nv.gov/posts/category/land. The Notice is being mailed to interested persons on the Bureau of Mining Regulation and Reclamation mailing list. Anyone wishing to comment on the proposed Permit can do so in writing within a period of 30 days following the date the public notice.
is posted to the Division website. The comment period can be extended at the discretion of the Administrator. All written comments received during the comment period will be retained and considered in the final determination.

A public hearing on the proposed determination can be requested by the applicant, any affected State or intrastate agency, or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted.

Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determines to be appropriate. All public hearings must be conducted in accordance with NAC 445A.403 through NAC 445A.406.

E. Proposed Determination

The Division has made the tentative determination to issue the renewed Permit.

F. Proposed Limitations, Schedule of Compliance, Monitoring, Special Conditions

See Section I of the Permit.

G. Rationale for Permit Requirements

The facility is located in an area where annual evaporation is greater than annual precipitation. Therefore, it must operate under a standard of performance which authorizes no discharge(s) except for those accumulations resulting from a storm event beyond that required by design for containment.

The primary method for identification of escaping process solution will be placed on required routine monitoring of leak detection systems as well as routinely sampling downgradient monitoring wells. Specific monitoring requirements can be found in the Water Pollution Control Permit.

H. Federal Migratory Bird Treaty Act

Under the Federal Migratory Bird Treaty Act, 16 U.S. Code 701-718, it is unlawful to kill migratory birds without license or permit, and no permits are issued to take migratory birds using toxic ponds. The Federal list of migratory birds (50 Code of Federal Regulations 10, 15 April 1985) includes nearly every bird species found in the State of Nevada. The U.S. Fish and Wildlife Service (the Service) is authorized to enforce the prevention of migratory bird mortalities at ponds and tailings impoundments. Compliance with State permits may not be adequate to ensure protection of migratory birds for compliance with provisions of Federal statutes to protect wildlife.

Open waters attract migratory waterfowl and other avian species. High mortality rates of birds have resulted from contact with toxic ponds at operations utilizing toxic substances. The Service is aware of two approaches that are available to prevent migratory bird mortality: 1) physical isolation of toxic water bodies through barriers (e.g., by covering with netting), and 2) chemical detoxification. These
approaches may be facilitated by minimizing the extent of the toxic water. Methods
which attempt to make uncovered ponds unattractive to wildlife are not always
effective. Contact the U.S. Fish and Wildlife Service at 1340 Financial Boulevard,
Suite 234, Reno, Nevada 89502-7147, (775) 861-6300, for additional information.

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